

Listing of the Claims

A full listing of the claims is as follows:

1. (Previously presented) A medical implant for deployment within a patient comprising:
an implant body having a first surface,
the first surface of the implant body covered with a continuous filter layer, wherein the filter layer continuously covers a catalyst that promotes the decomposition of hydrogen peroxide, and wherein the filter layer has pores of a size in the range of 2 – 50 nm.
2. (Previously presented) The medical implant of claim 1 wherein the filter layer comprises a mesoporous material.
3. (Previously presented) The medical implant of claim 1 wherein the catalyst is positioned between the implant and the filter layer.
4. (Previously presented) The medical implant of claim 1 wherein the filter layer covers the entire first surface of the implant.
5. (Original) The medical implant of claim 1 wherein the catalyst covers the entire first surface of the implant.
6. (Withdrawn) The medical implant of claim 1 wherein the filter layer also comprises a therapeutic.
7. (Original) The medical implant of claim 1 wherein the catalyst also comprises a therapeutic.
8. (Withdrawn) The medical implant of claim 1 wherein the filter layer covers the first surface and a second surface.

9. (Previously presented) The medical implant of claim 1 wherein fluid in contact with the implant must pass through the filter layer in order reach the catalyst.
10. (Previously presented) The medical implant of claim 2 wherein the meso-porous material is titanium oxide.
11. (Canceled)
12. (Withdrawn) The medical implant of claim 1 further comprising a polymer coating, the polymer coating positioned between the filter layer and the catalyst.
13. (Original) The medical implant of claim 1 wherein the implant body includes a stent.
14. (Withdrawn) The medical implant of claim 13 wherein the filter layer is positioned along a first face, a second face, and a third face of the stent.
15. (Withdrawn) The medical implant of claim 13 wherein the filter layer does not cover at least a portion of the stent.
16. (Withdrawn) The medical implant of claim 1 further comprising a polymer layer covering the first surface of the implant body.
17. (Withdrawn) The medical implant of claim 16 wherein the catalyst is positioned between the polymer and the implant body.
18. (Withdrawn) The medical implant of claim 16 wherein portions of the polymer have been removed to create access paths through the polymer.
19. (Withdrawn) The medical implant of claim 18 wherein the implant body contains indentations coinciding with the location of at least one access path in the polymer.

20. (Withdrawn) The medical implant of claim 16 wherein the polymer comprises a therapeutic.
21. (Previously presented) The medical implant of claim 1 wherein the filter layer comprises carbon nanotubes.
22. (Previously presented) The medical implant of claim 1 wherein the filter layer comprises bucky paper.
23. (Withdrawn) The medical implant of claim 1 wherein the implant contains stent struts having tapered cross-sections, an inner surface of the strut having a larger area than an outer surface of the strut.
24. (Withdrawn) The medical implant of claim 1 wherein the first surface of the implant is covered by titanium, iridium oxide, and bucky paper.
25. (Previously presented) The medical implant of claim 1 wherein the medical implant is an expandable stent, and wherein regions of high strain of the stent when the stent is expanded are not covered with the filter layer while regions of relatively lower strain when the stent is expanded are covered with the filter layer.
26. (Original) The medical implant of claim 1 wherein the catalyst is chosen from a group consisting of manganese, iridium oxide, and platinum.
27. (Original) The medical implant of claim 1 wherein the catalyst has been previously treated to increase its surface area.
28. (Previously presented) The medical implant of claim 1 wherein the filter layer is bucky paper containing iridium oxide.

29. (Original) The medical implant of claim 1 wherein the implant body comprises a polymer.
30. (Previously presented) The medical implant of claim 1 wherein the medical implant is a non-polymer.
31. (Previously presented) A medical implant having a longitudinal axis, comprising:
a plurality of connected struts,
a first strut having a tapered transverse cross-section relative to the longitudinal axis of the medical implant, the cross-section becoming smaller in area when moving from a reference point on the inside of the implant to the outside of the implant,
wherein at least one of the struts is covered with a continuous filter layer, the filter layer continuously covering a catalyst that promotes the decomposition of hydrogen peroxide, and wherein the filter layer has pores of a size in the range of 2 – 50 nm.
32. (Original) The medical implant of claim 31 further comprising a second strut, the second strut having a tapered cross-section, the cross-section becoming smaller in area when moving from a reference point on the inside of implant to the outside of the implant, the cross-section of the second strut being different than the cross section of the first strut.
33. (Original) The medical implant of claim 32 wherein the struts are stent struts from an expandable stent.
34. (Canceled)
35. (Canceled)
36. (Previously presented) The medical implant of claim 1, wherein the filter layer comprises a metallic material.
37. (Previously presented) The medical implant of claim 40, wherein the catalyst comprises a metal oxide.

38. (Previously presented) The medical implant of claim 1, wherein the pores are uniformly-sized.
39. (Previously presented) The medical implant of claim 31, wherein the pores are uniformly-sized.
40. (Previously presented) The medical implant of claim 1, wherein the filter layer comprises a ceramic material.
41. (Previously presented) The medical implant of claim 40, wherein the ceramic material is a metal oxide.
42. (Previously presented) The medical implant of claim 40, wherein the catalyst comprises titanium oxide.
43. (Previously presented) The medical implant of claim 1, further comprising a therapeutic agent that is carried by or adhered to the filter layer or the catalyst.